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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

BUDD, MARK OSBORNE

ART UNIT PAPER NUMBER

2834

DATE MAILED: 01/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/801194

Applicant(s)

Magnussen et al

Examiner

M. Boud

Group Art Unit

2834

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☐ Responsive to communication(s) filed on _____.
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) _____ is/are pending in the application.
- Of the above claim(s) 124 is/are withdrawn from consideration.
- ☒ Claim(s) 1-7, 9, 10, 12-14, 16-18, 20-26, 35-46, 75, 77-85 & 148-156 is/are allowed.
- ☒ Claim(s) 27-34, 47, 49-68, 72-74, 118-123 & 127-147 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____.
 - ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 6, 7, 9, 10 ☐ Interview Summary, PTO-413
- ☒ Notice of Reference(s) Cited, PTO-892 ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948 ☐ Other _____

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Claims 34, 47, 49-57, 118-123 and 127-137 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are vague, indefinite and/or incomplete. The driven member is explicitly excluded in the claimed combination which is O.K. per se. However, without the specific inclusion of a driven element there cannot exist any angular relationship between the "selected portion" and something which does not exist as part of the combination. Thus any relationship to such a 'ghost' member has no meaning and is confusing. Consequently, it is not possible to determine the metes and bounds of these claims.

Claims 118-123 and 138-143 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

These claims are vague and indefinite. There is no clearly stated structural relationship between the first second and third sections. There is no clear meaning for "any shaped surface leading to the---". Leading to or from where? The claim further states that "excluding the first, second and third sections", but does not explicitly state any more sections are actually present to form the resonator. Perhaps applicant could respond with a marked up drawing showing how this claim can be read on any of the originally disclosed figures. From the present language one cannot determine the metes and bounds of these claims. In claim 118 "configured to achieve a first (second) patent" has no definable meaning. The claim is further confused by "exciting the

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vibratory element---” which is a method step and does not add any structure to the apparatus claimed.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 58-61, 64 and 66 are rejected under 35 U.S.C. 102(a) as being anticipated by Mishiro (843), Mishiro (697) or Endo.

Mishiro (697) (figs. 1, 2, 7, 24 and 25), Endo (figs. 1-8, 12-14 and 19-24) and Mishiro (843) (figs. 1, 4-6 and 8-10) each teach a resonator driven by piezoelectric elements to produce elliptical motion at the output end, which motion move a driven element. Note that “the elliptical path--- predetermined axis--- defined angle that varies--- when frequency varies---” is merely a statement of desired function and adds no structure to the device claimed. Likewise, in claim 64, the “angle B” has no meaning since no “driven member” is actually claimed.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 27, 28, 62, 67, 68, 72 and 73 as understood are rejected under 35 U.S.C. 103(a) as being unpatentable over Mishiro (843), Mishiro (697) or Endo in view of Zumeris (421).

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As noted above, Mishiro and Endo teach the vibration source, resonator and driven member. They do not explicitly show a spring bias coupling the resonator to the driven member. However, some pressing means is obviously necessary to keep the drive and driven surfaces in contact in an actual working device. Zumeris (421) (figs. 1-3, 10 and 11) clearly teaches the necessary bias in its simplest form can constitute a spring attached to a base and urging the vibrator toward the driven member. Thus for both its simplicity and necessity, it would have been obvious to one of ordinary skill in the art to provide Mishiro or Endo with the spring bias taught by Zumeris.

Claims 32 and 132-137 (as understood) rejected under 35 U.S.C. 103(a) as being unpatentable over Mishiro (843), Mishiro (697) or Endo in view of Zumeris (421) as applied to claim 27 above, and further in view of Safabakhsh.

This claim adds that the resonator has a pocket that contains the piezo drive elements. Safabakhsh (figs. 4-8) teaches this construction as a stronger more efficient alternative to the traditional thru bolt construction (note 'prior art' figs. 1-3) of Mishiro and Endo. Thus for at least these reasons it would have been obvious to one of ordinary skill in the art to construct Mishiro or Endo using the monolithic resonator blocks taught by Safabakhsh.

Claims 118-123 (as understood) are rejected under 35 U.S.C. 102(a) as being anticipated by Uchino or Ohinishi.

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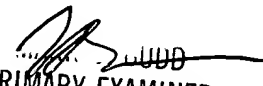
Both references teach a vibrating element that has 'longitudinal' axis which has portions that move a driven member in opposite directions depending on whether 'a first' or a 'second' frequency is used to drive the device.

Claims 138-147 (as understood) are rejected under 35 U.S.C. 102(a) as being anticipated by Safabakhsh.

The reference teaches in figs. 4-8 the resonator wherein the piezo elements are contained within an opening. Note that statements of desired function without commensurate structure to achieve the function do not limit the claimed combination. Thus "said mode being neither a pure bending or pure longitudinal mode" "wherein the vibrating component vibrates in a second mode ---" (no actual second frequency signal is claimed) and "stretched past its elastic limit---" are not seen as defining any structure which could define from the reference.

Claims 29-32, 34, 47-57, 63, 74 and 127-130 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 1-7, 9, 10, 12-114, 16-18, 20-26, 35-46, 75, 77-85 and 148-156 are allowed.


PRIMARY EXAMINER
ART UNIT 212